IN THE DRAWINGS

The attached sheets of drawings include changes to Figs. 1b, 2b, 3, 4, and 7. These sheets, which includes Figs. 1b, 2b, 3, 4, and 7, replaces the original sheet including Figs. 1b, 2b, 3, 4, and 7.

Attachment: Replacement Sheets

REMARKS

Favorable reconsideration of this application, as presently amended and in light of the following discussion, is respectfully requested.

Claims 1-13 are currently pending. Claims 1-13 have been amended by the present amendment. The changes to the claims are supported by the originally filed specification and do not add new matter.

In the outstanding Office Action, the Examiner indicated that the Information Disclosure Statement filed May 9, 2002, fails to comply with 37 C.F.R. §1.98(a)(3) because it does not include a concise explanation in English of the relevance of the foreign references; the Drawings were objected to as failing to comply with 37 C.F.R. §1.84(p)(5) as failing to contain reference symbols mentioned in the specification and for including reference symbols in the specification that are not shown in the figures, for handwriting in the drawings, and for descriptive labels not in English; the Abstract was objected to regarding use of legal phraseology; the specification was objected to because "Claim 1 recites 'the output of the iterative decoding'"; Claims 5-13 were objected to under 35 U.S.C. §1.75(c) as being in improper multiple dependent form; Claims 1-13 were rejected under 35 U.S.C. §112, first paragraph, as failing to comply with the enablement requirement regarding the phrase "the output of the iterative decoding"; Claims 1-13 were rejected under 35 U.S.C. §112, second paragraph, as omitting essential structured cooperative relationships of elements and regarding questions of antecedent basis in Claim 1; Claims 1-13 were rejected under 35 U.S.C. §101 as failing to set forth any steps involved in the claimed process; Claims 1-4 were rejected under 35 U.S.C. §102(e) as being anticipated by U.S. Patent 6,430,722 to Eroz et al. (hereinafter "the '722 patent"); and Claims 1-13 were provisionally rejected under the judicially created doctrine of obviousness-type double patenting over Claims 1-19 of copending Application No. 10/093,495.

Applicants wish to thank the Examiner for the interview granted Applicants' representative on September 17, 2004, at which time a proposed amendment to Claim 1 was discussed. At the conclusion of the interview, the Examiner agreed to reconsider the objections to and rejections of the drawings, specification, and claims when a response to the outstanding Office Action is filed.

Regarding the objection to the Information Disclosure Statement filed May 9, 2002, submitted herewith are translations of the Abstracts of the foreign references initially submitted in the IDS filed May 9, 2002. Accordingly, the objection to that IDS is believed to have been overcome.

Applicants respectfully submit that the objection to the Drawings is rendered moot by the present amendment to the Drawings. The Drawings have been amended to include the reference label 204. Further, the specification has been amended to include a description of elements 161, 165, 166, 167, 221, 241, 270, and 280. No new matter has been added. Moreover, the Drawings have been amended to no longer include handwriting and to no longer include descriptive labels not in English.

Regarding the objection to the Abstract, the Abstract has been amended to no longer include legal phraseology. Accordingly, the objection to the Abstract is believed to have been overcome.

Regarding the objection to the specification, the specification has been amended to incorporate section headings and to include a description of all elements shown in the drawings, as discussed above. Moreover, regarding the objection to the specification related to the recitation in Claim 1 of the "output of the iterative decoding," Applicant respectfully submits that this objection is rendered moot by the present amendment to Claim 1, as discussed below.

Applicant respectfully submits that the objection to Claims 5-13 under 37 C.F.R. §1.75(c) is rendered moot by the present amendment to Claims 5-13. Claims 5-13 have been amended to no longer be multiple dependent claims.

Applicants respectfully submit that the rejection of Claims 1-13 under 35 U.S.C. §112, first paragraph, is rendered moot by the present amendment to Claims 1-13. In particular, Applicant notes that Claim 1 has been amended to no longer recite "the output of the iterative decoding."

Regarding the rejection of the claims under 35 U.S.C. §112, second paragraph, Claim 1 has been amended to address the antecedent basis questions noted in the Office Action. Further, the claims have been amended to clearly recite method steps. Accordingly, Applicant respectfully submits that the rejection of the claims under 35 U.S.C. §112, second paragraph, is rendered moot by the present amendment to the claims.

Applicants respectfully submit that the rejection of the claims under 35 U.S.C. §101 is rendered moot by the present amendment to the claims. As noted above, the claims have been amended to clearly recite method steps.

Amended Claim 1 is directed to a method of optimizing a size of coded data blocks intended to be subjected to an iterative decoding process, wherein a maximum acceptable error rate of the iterative decoding process is fixed in advance, comprising: (1) determining a submultiple block size among a plurality of integer block sizes N/k, which are submultiples of an integer block size N by an integer factor k greater than or equal to 1, wherein k is a factor of N; and (2) determining a maximum number of iterations among a plurality of integers corresponding to a maximum number of iterations to be applied by the iterative decoding process on a coded data block, based on the maximum error rate, and such that a mean number of iterations that will be applied by the iterative decoding process on a submultiple sized block is minimized. Claim 1 has been amended for the purpose of

clarification only and to clearly recite method steps. The changes to Claim 1 are supported

by the originally filed specification and do not add new matter.

Regarding the rejection of Claim 1 under 35 U.S.C. §102, the '722 patent is directed

to a forward-error-correcting scheme for data channels using universal turbocodes. As noted

in the Office Action, the convolutional encoder 108 shown in Figure 1 is coupled to a

synchronization and framing processor 104 which produces N/r code symbols 110 at an input

of a channel interleaver 112 coupled to the convolutional encoder 108.[1] Initially, Applicant

notes that the rate r is generally disclosed in the '722 patent to be a number less than 1, such

as 1/2 or 1/3. Thus, it does not appear that the rate r disclosed by the '722 patent is in any

way equivalent to the integer factor k (which is greater than or equal to 1) recited in Claim 1.

In particular, Applicant notes that the block sizes N/k recited in Claim 1 must inherently be

less than or equal to the integer block size N. Further, Applicant respectfully submits that the

'722 patent fails to disclose the steps of (1) determining a submultiple block size among a

plurality of block sizes that are submultiples of an integer block size N; and (2) determining a

maximum number of iterations among a plurality of integers, based on a maximum error rate,

such that a mean number of iterations that will be applied by an iterative decoding process is

minimized, as recited in amended Claim 1. Accordingly, Applicant respectfully submits that

the rejection of Claim 1 (and dependent Claims 2-4) are rendered moot by the present

amendment to Claim 1.

Applicant respectfully traverses the rejection of Claims 1-13 under the judicially

created doctrine of obviousness-type double patenting over claims in copending application

Serial No. 10/093,495. Applicant notes that Claim 1 of the '495 application recites the step

of <u>evaluating a resource available for decoding of a block of size N</u>, which is not recited in

---

[1] See '722 patent, column 5, lines 20-25.

amended Claim 1. Accordingly, Applicant respectfully submits that Claim 1 of the present application and Claim 1 of the '495 application are directed to different subject matter.

Thus, it is respectfully submitted that Claim 1 (and dependent Claims 2-13) patentably defines over the '722 patent.
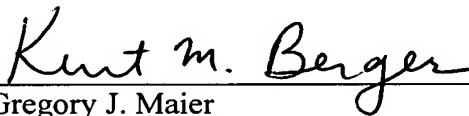
Consequently, in view of the present amendment and in light of the above discussion, the outstanding rejection of the claims is believed to have been overcome. The application as amended herewith is believed to be in condition for formal allowance. An early and favorable action to that effect is respectfully requested.

Respectfully submitted,

OBLON, SPIVAK, McCLELLAND,
MAIER & NEUSTADT, P.C.

Customer Number
22850

Tel: (703) 413-3000
Fax: (703) 413 -2220
(OSMMN 06/04)
KMB/rac

Kurt M. Berger
Gregory J. Maier
Attorney of Record
Registration No. 25,599
Kurt M. Berger, Ph.D.
Registration No. 51,461

I:\ATTY\KMB\220's\220260US\220260US-AM.DOC

19